

## Module

### Making Music: ASCII Keyboard Instrument

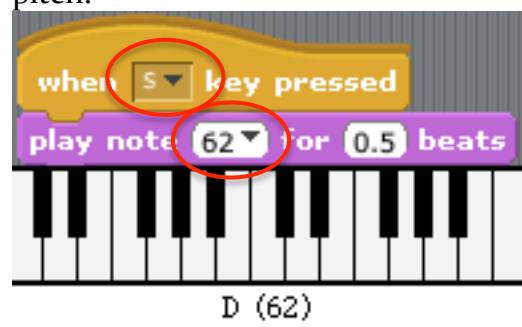
Go to the Scripts for your Stage. Here you are going to build an ASCII Keyboard Instrument.

Start by adding an instrument that is triggered by a key press:



Press the 'a' key on the keyboard to see what happens. The note 'C' on the piano should play.

Duplicate the Stack, change the key being pressed, and the note to get a new pitch:



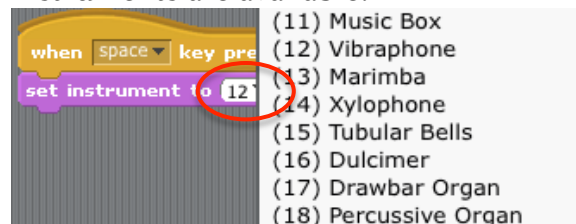
Keep duplicating and changing the notes and keys until you have created five or six different Stacks with unique pitches and keys.

Once you have built your instrument, add a Stack that lets you change the instrument:



Here, when I press the 'space' key, the instrument is changed to a Marimba.

Click on the down arrow within the 'set Instrument to x' Block to see which instruments are available:



Try it out – Press the various assigned keys to play a melody.

*Want to try something else?*

Use the random numbers to change the different numeric values.

Make changing instruments more of a surprise with the 'random' Block. Set the values to '0' and '127':



Put this Block inside the 'set instrument to x' Block:



*Want to try something else?*

Use the arrow keys to change the volume.

The down and up arrow keys can be used to decrease and increase the volume:

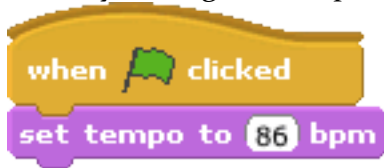


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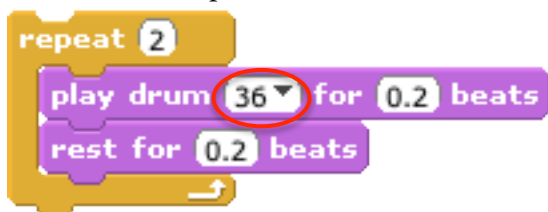
### Making Music: Create a Drumbeat

Go to the Scripts for your Stage. Here you are going to program a drumbeat.

Start by setting the tempo:



Set the beat & pick a drum:



Change it up with a different drum effect:



Complete the measure:



Wrap it up with a repeat Block:



Snap them all together and it should look like this:



Try it out – Click the Green Flag:

